

Ha discloses a structure for a liquid crystal display ("LCD") panel having an electrostatic discharge prevention circuit ("EDP") with a control terminal 30 required to be electrically connected to a gate electrode G of a transistor 20 of the EDP. (See FIG. 3A). Ha discloses that the control terminal is necessary in order to place the gate electrode of each EDP into a floating state during fabrication of the LCD. (See col. 3, lines 45-48). The control terminal 30 also serves to turn on the switches of the EDP transistor by electrostatic voltages at the gate and data lines. This control terminal 30 is also necessary during normal operation of the LCD to maintain all EDP transistors in the OFF state. As best seen in FIG. 4 of Ha, therefore, the gate electrode of all EDP transistors must be electrically connected to a respective control terminal, which control terminals are all electrically connected in common to either of the control ports 50-1 or 50-2. These control terminals 30 thus require a cumbersome and disadvantageous configuration.

In contrast, the present invention features an LCD having an electrostatic protection element portion ("EPEP"), where the gate electrode of a transistor of the EPEP is not connected by wiring to a control terminal like that required in Ha. Furthermore, in addition to eliminating the need for a control terminal as in Ha, the present invention also allows each EPEP to be independent, inasmuch as the EPEP transistor gate electrodes are not electrically connected to control terminals which are all electrically connected in common. Ha neither discloses nor suggests such an advantageous configuration.

In fact, Ha actually teaches away from the present invention by requiring such control terminals connected to the gate electrodes of every EDP transistor. A rejection based on obviousness is inappropriate when one or more of the cited references on which the rejection is based teaches away from the present invention. Because Ha teaches away from the present invention, the Section 103 rejection based on Ha is respectively traversed.

With respect to claim 3 of the present invention specifically, Ha further teaches away from the present invention by requiring two resistance units for *each* EDP. Claim 3 of the present invention, on the other hand, features a *common* resistor utilized as a second resistor. It is best seen in FIG. 12, the common element 37 serves to advantageously decrease the number of required elements in both the EPEP, as well as the LCD as a whole. This advantageous feature of the present invention is neither taught nor even suggested by Ha. For at least these additional reasons, Section 103 rejection is further traversed.

Moreover, not only does the present invention include features neither taught nor suggested by Ha, the present invention even serves to correct for structural defects presented by Ha. Problems addressed and solved by the present invention are to be taken into consideration in weighing the appropriateness of a rejection based on obviousness. Where the present invention addresses and solves problems or defects not addressed in the prior art, an obviousness rejection based on that prior art should be withdrawn.

The structural defects of Ha as an EDP are best seen in FIGS. 3A and 3B. Because the gate electrodes of all EDP transistors are electrically connected in common, all of the resistors are to behave as in a parallel connection state, and a high potential is thus generated on the bus line side of the EDP. By this configuration therefore, the effective resistance value of the resistors R2 becomes extremely small. This extremely small value for R2 thus leads to an extremely high effective resistance value for resistor R1 on the high potential bus line. This imbalance leads to the disadvantageous condition where not enough voltage is applied to the EDP transistor gate electrode, thus preventing the transistor from being turned on. This disadvantageous condition can similarly result when capacitors are substituted for resistors, such as in FIG 3B. The structure of Ha therefore, may potentially fail to even function as the desired static electricity EDP.

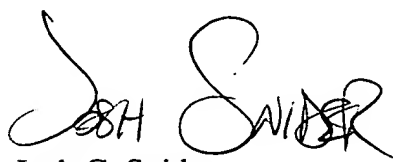
As best seen in FIGS. 12 and 13, the present invention, on the other hand, features an EPEP circuit having one element 37 in common, which therefore does not act like the parallel connection of the many resistance units R2 of Ha. This common configuration of the present invention avoids the structural defects presented by Ha, and therefore also advantageously avoids the disadvantageous condition of Ha, described above. Accordingly, or at least for these additional reasons as well, the rejection based on Ha is even further traversed.

For all of the foregoing reasons, Applicants submit that this Application, including claims 1-16, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted

GREER, BURNS & CRAIN, LTD.

By

A handwritten signature in black ink, appearing to read "Josh C. Snider". The signature is stylized with a large, looping "S" and "N".

Josh C. Snider

Registration No. 47,954

**Customer No.: 24978**

September 9, 2002

Suite 2500  
300 South Wacker Drive  
Chicago, Illinois 60606  
Telephone: (312) 360-0080  
Facsimile: (312) 360-9315

K:\1324\64383\Response A.DOC